

### Remarks

Claims 1-16 are pending in the application. Reconsideration and allowance of the application are respectfully requested.

The non-final Office Action dated August 30, 2007 lists the following rejections: claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) over Main (U.S. Patent No. 4,728,815); claim 9 stands rejected under 35 U.S.C. § 103(a) over Main; and claims 1, 4, and 9 stand rejected under 35 U.S.C. § 103(a) over Theus (U.S. Patent No. 5,654,629). It is noted that claims 3 and 5-8 are objected to but would be allowable if rewritten in independent form.

Applicant respectfully submits that the Section 102(b) rejection of claims 1 and 2 cannot stand because the cited portions of the Main reference do not correspond to the claimed invention. For example, the cited portions of Main do not teach that a first current mirror is active and a second current mirror is off in response to a positive current signal and that the second current mirror is active and the first current mirror is off in response to a negative current signal. In contrast, Main teaches that current mirrors 74 and 76 are both active when the alternating input signal goes positive and that current mirrors 74 and 76 are also both active when the input signal goes negative. When the input current goes positive Main teaches supplying more current to current mirror 76 than is supplied to current mirror 74, and when the input current goes negative Main teaches supplying more current to current mirror 74 than is supplied to current mirror 76. *See, e.g.,* Figure 4 and Col. 5:1-17. In each instance, both of Main's current mirrors 74 and 76 are active. Accordingly, the Section 102(b) rejection of claims 1 and 2 is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses the Section 103(a) rejection of claim 9 because the cited portions of the Main reference do not correspond to the claimed invention as discussed above in relation to the Section 102(b) rejection of claim 1. Applicant submits that claim 9 contains aspects similar to those of claim 1 discussed above. For example, claim 9 has aspects directed to a first current mirror being active during a positive swing of the ultrasound bipolar current signal while a second current mirror is off and the second current mirror being active during a negative signal swing of the ultrasound bipolar current signal while the first current mirror is off, which are not taught by the

Main reference. Thus, the Section 103(a) rejection of claim 9 is improper because the rejection relies upon the same mischaracterization of the Main reference. Therefore, Applicant requests that the Section 103(a) rejection of claim 9 be withdrawn.

Applicant respectfully traverses the Section 103(a) rejection of claims 1, 4, and 9 because the cited portions of the Theus reference do not correspond to the claimed invention. For example, the cited portions of Theus do not teach that a first current mirror is active and a second current mirror is off in response to a positive current signal or that the second current mirror is active and the first current mirror is off in response to a negative current signal. In contrast, Theus teaches that n-channel transistors (44 and 46) and p-channel transistors (48 and 50) mirror the current-source current  $i_6$  and the current  $i_8$ . *See, e.g.*, Figure 4 and Col 5:63-67. The cited portions of Theus fail to teach or suggest that, when the input current  $i_d$  is positive, the p-channel transistors (48 and 50) are active and the n-channel transistors (44 and 46) are off. Theus also fails to teach that, when the input current  $i_d$  is negative, the n-channel transistors (44 and 46) are active and the p-channel transistors (48 and 50) are off. Accordingly, the Section 103(a) rejection of claims 1, 4, and 9 is improper and Applicant requests that it be withdrawn.

In response to the potential allowability of claims 3 and 5-8, Applicant has rewritten claim 3 in independent form as new claim 10, which incorporates limitations of the base claim and any intervening claims. Applicant submits that, as is consistent with the instant Office Action, claim 10 is in condition for allowance over the cited references. New claims 11-16 depend from claim 10 and are allowable over the cited references for at least the same reasons as claim 10. That is, where an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *See, e.g., In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Applicant respectfully requests that claims 10-16 be allowed.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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